Section 12 - Surface Coating of Plastic Parts.
11/29/94

a. Applicability.

1. This Section applies to any facility that coats plastic components for the following uses:

i. Automotive or other transportation equipment including interior and/or exterior parts for automobiles, trucks (light-, medium-, or heavy-duty), large and small farm machinery, motorcycles, construction equipment, vans, buses, lawnmowers, and other mobile, motorized mobilized equipment.

ii. Housing and exterior parts for business and commercial machines including, but not limited to, computers, copy machines, typewriters, medical equipment, and entertainment equipment.

2. This Section applies to in-house coating processes conducted at original equipment manufacturer (OEM) sites, as well as to coating processes conducted by contractors specializing in molding and coating plastic parts, and by job-shops performing OEM coating only. This Section applies to coating operations that include coating application (e.g., spraying, dipping, and flow-coating), flash-off areas, and curing ovens.

3. If a metal component that is permanently attached to a plastic part is coated in a spray booth or on a process line where plastic parts are being coated, this Section applies to the coating of both the plastic part and the attached metal component.

4. This Section does not apply to the following operations:

i. Coating of interior and exterior parts of aircraft.

ii. Coating of exterior of completely assembled marine vessels.

iii. Refinishing of aftermarket automobiles, trucks, and other transportation equipment.

iv. Coating of internal electrical components of business and commercial machines.

v. Coating of a metal component in a spray booth or on a process line that is permanently attached to a plastic part where both the attached metal component and the plastic part are coated subject to the requirements of Section 13 of this regulation *(Auto and Light-Duty Truck Coating Operations)* or to Section 22 of this regulation *(Coating of Miscellaneous Metal Parts)*.

5. The requirements in paragraph (c) of this Section do not apply to plastic parts coating facilities whose plant-wide actual emissions, without control devices, from all plastic parts coating operations, are less than 6.8 kilograms (kg) (15 pounds [lb]) of volatile organic compounds (VOCs) per day.

6. An owner operator of a facility whose emissions are below the applicability threshold in paragraph (a)(5) of this Section shall comply with the certification, recordkeeping, and reporting requirements listed in Section 4(b) of Regulation 24.

7. Existing sources affected by this Section shall comply with the provisions of this Section as soon as practicable, but no later than April 1, 1996. New, modified, or reconstructed sources affected by this Section shall comply with the provisions of this Section upon startup.

8. Any facility that becomes or is currently subject to the provisions of this Section by exceeding the applicability threshold in paragraph (a)(5) of this Section shall remain subject to these provisions even if its emissions later fall below the applicability threshold.

9. Any facility that is currently subject to a state or federal rule promulgated pursuant to the Clean Air Act Amendments of 1977 by exceeding an applicability threshold is and shall remain subject to these provisions, even if its throughput or emissions later fall below the applicability threshold.

b. Definitions. As used in this Section, all terms not defined herein shall have the meaning given them in the November 15, 1990 Clean Air Act Amendments (CAAA), or in Section 2 of Regulation 24.

"Add-on control device" means an air pollution control device, such as a carbon adsorber or an incinerator, which reduces the pollution in an exhaust gas. The control device usually does not affect the process being controlled and is thus considered to be an "add-on" technology, as opposed to a reduction in pollution through an alteration to the basic process.

"Adhesion promoter (primer)" means a coating that is applied to thermoplastic olefin

(TPO) parts to promote adhesion of subsequent coatings.

"Affected facility" means any apparatus, subject to a standard, that is involved in the coating of plastic parts.

"Aftermarket automobile" means a vehicle that has been purchased from the original equipment manufacturer.

"Basecoat/clearcoat" means a two-step topcoat system in which a highly pigmented, often metallic, basecoat is followed by a clearcoat, resulting in a finish with high-gloss characteristics. It is often used on automotive plastic parts.

"Electromagnetic interference/radio frequency interference (EMI/RFI) coating" means a coating that is used in a plastic business machine housing to attenuate electromagnetic and radio frequency interference signals that would otherwise pass through the plastic housing.

"Flexible coating" means a paint that can withstand dimensional changes.

"High-bake coating" means a coating that is designed to cure at temperatures above 90 degrees Celsius (°C) (194 degrees Fahrenheit [°F]).

"Higher-solids coating" means a coating that contains greater amounts of pigment and binder than a conventional coating. Solids are the non-solvent, non-water ingredients in the coating. A higher-solids coating usually contains more than 60 percent solids by volume.

"Low-bake coating" means a coating that is designed to cure at temperatures lower than 90°C (194°F).

"Nonflexible coating" means a paint that cannot withstand dimensional changes.

"Overspray" means the solids portion of a coating which, when sprayed, fails to adhere to the part being coated. The applied solids plus the overspray solids equal the total coating solids delivered by the spray application system.

"Plastic part" means a piece made from a substance that has been formed from resin through the application of pressure and/or heat.

"Solids content" means the non-solvent, non-water ingredients in the coating, which consist of pigments and binders, that do not evaporate and have the potential to form a cured (dry) film. The solids content can be expressed in terms of volume percent or weight percent.

"Specialty coating" means a coating that is used for unusual job performance requirements, usually in small amounts. These products include but are not limited to adhesion primers, resist coatings, soft coatings, reflective coatings, electrostatic prep coatings, headlamp lens coatings, ink pad printing coatings, stencil coatings, texture coatings (automotive), vacuum metalizing coatings, and gloss flatteners.

"Two-component paint" means a coating that is manufactured in two components that are mixed shortly before use. When mixed, the two liquids rapidly crosslink to form a solid composition.

"Waterborne coating" means a coating that contains greater than 5 weight percent water in its volatile fraction.

c. Standards.

1. Automotive/Transportation Sector. The VOC content of any automotive/transportation plastic parts surface coating, as applied, shall not exceed the applicable limitations specified in Table 1.

2. Business Machine Sector. The VOC content of any business machine parts surface coating, as applied, shall not exceed the applicable limitations specified in Table 2.

3. As an alternative to compliance with the emission limits in paragraphs (c)(1) and (c)(2) of this Section, an owner or operator may meet the requirements of paragraph (d) or (e) of this Section.

TABLE 1. VOC CONTROL LEVELS FOR AUTOMOTIVE/TRANSPORTATION COATINGS

Coating Category			Control Level[a] (lb VOC/gal)	Control Level[a] (kg VOC/L)
I.	Auto Interiors			
	1)	High-Bake Colorcoats	4.1	0.49
	2)	High-Bake Primers	3.8	0.46
	3)	Low-Bake Colorcoats	3.2	0.38
	4)	Low-Bake Primers	3.5	0.42
II.	Auto Exteriors (Flexible and Non-Flexible)			
	1)	High-Bake Coatings		
		a) Colorcoats	4.6	0.55
		b) Clearcoats	4.3	0.52
		c) Primers	5.0	0.60
		d) Primers-Non-Flexible	4.5	0.54
	2)	Low-Bake Coatings		
		a) Primers	5.5	0.66
		b) Red and Black Colorcoats	5.6	0.67
		c) Colorcoats - All Other Colors	5.1	0.61
		d) Clearcoats	4.5	0.54
III.	Auto Specialty			
	1)	Group (A) Coatings[b]	5.5	0.66
	2)	Group (B) Coatings[c]	5.9	0.71
	3)	Group (C) Coatings[d]	6.4	0.77
	4)	Group (D) Coatings[e]	6.8	0.81
	5)	Headlamp Lens Coatings	7.4	0.89

[a]The VOC content values are expressed in units of mass of VOC (pounds [lb] or kilograms [kg]) per volume of coating (gallons [gal] or liters [L]), excluding water and exempt compounds, as applied.

[b]Group (A) coatings consist of Vacuum Metalizing Basecoats and Texture Coatings.

[c]Group (B) coatings consist of Black and Reflective Argent Coatings, Soft Specialty Coatings, and Air Bag Cover Coatings.

[d]Group (C) coatings consist of Gloss Flatteners, Vacuum Metalizing Topcoats, and Texture Topcoat.

[e]Group (D) coatings consist of Stencil Coatings, Adhesion Primers, Ink Pad Printing Coatings, Electrostatic Prep Coats, and Resist Coatings.

TABLE 2. VOC CONTROL LEVELS FOR BUSINESS MACHINE COATINGS

Coating Category			Control Level[a] (lb VOC/gal)	Control Level[a] (kg VOC/L)
I.	Primers		1.2	0.14
II.	Colorcoats		2.3	0.28
III.	Colorcoats/Texture coats		2.3	0.28
IV.	EMI/RFI Coatings		4.0	0.48
V.	Specialty Coatings			
	1)	Soft Coatings	4.3	0.52
	2)	Plating Resist Coatings	5.9	0.71
	3)	Plating Sensitizer Coatings	7.1	0.85

[a]The VOC content values are expressed in units of mass of VOC (pounds [lb] or kilograms [kg]) per volume of coating (gallons [gal] or liters [L]), excluding water and exempt compounds, as applied.

d. Daily-Weighted Average Limitation. An owner or operator of a plastic parts coating operation in which multiple coatings are applied, all of which are subject to the same numerical emission limits listed in paragraphs (c)(1) or (c)(2) above, shall not apply, during the same day, coatings on any operation whose daily-weighted average VOC content, calculated in accordance with the procedure specified in **Appendix "C"** of Regulation 24, exceeds the coating VOC content limit for the corresponding coating category.

e. Control Devices.

1. An owner or operator of a plastic parts coating operation subject to this Section may comply with this Section by doing all of the following:

i. Installing and operating a capture system on that operation.

ii. Installing and operating a control device on that operation.

iii. Determining for each day the overall emission reduction efficiency need to demonstrate compliance. The overall emission reduction needed for a day is the lesser of the value calculated according to the procedure in **Appendix "C"** of Regulation 24 for that day, or 95 percent.

iv. Demonstrating each day that the overall emission reduction efficiency achieved for that day, as determined in **Appendix "C"** of Regulation 24, is greater than or equal to the overall emission reduction efficiency required for that day.

2. An owner or operator of a plastic parts coating operation subject to this Section shall ensure that:

i. A capture system and a control device are operated at all times the coating operation is in use, and that compliance with this Section is demonstrated through the use of the applicable coating analysis and capture system and control device efficiency test methods specified in **Appendix "B"**, **Appendix "D"**, and **Appendix "E"** of Regulation 24.

ii. The control device is equipped with the applicable monitoring equipment specified in **Appendix "D"** of Regulation 24, and that the monitoring equipment is installed, calibrated, operated, and maintained according to the vendor's specifications at all times the control device is in use.

f. Test Methods. The test methods found in **Appendices "A"** through **"C"** of Regulation 24 shall be used to determine compliance with paragraphs (c)(1) and (c)(2) of this Section.

g. Compliance Certification, Recordkeeping, and Reporting Requirements.

1. An owner or operator of a plastic parts surface coating operation that is exempt from the emission limits listed in paragraphs (c)(1) and (c)(2) of this Section shall comply with the certification, recordkeeping, and reporting requirements listed in Section 4(b) of Regulation 24.

2. An owner or operator of a plastic parts surface coating operation that is subject to this Section and that is complying with paragraph (c)(1) or (c)(2) of this Section through the use of compliant coatings shall comply with the certification, recordkeeping, and reporting requirements listed in Section 4(c) of Regulation 24.

3. An owner or operator of a plastic parts surface coating operation that is subject to this Section and that is complying with paragraph (c)(1) or (c)(2) of this Section through the use of daily-weighted averaging shall comply with the certification, recordkeeping, and reporting requirements listed in Section 4(d) of Regulation 24.

4. An owner or operator of a plastic parts surface coating operation that is subject to this Section and that is complying with paragraph (c)(1) or (c)(2) of this Section through the use of control devices shall comply with the certification, reporting, and recordkeeping requirements listed in Section 4(e) of Regulation 24.